AMENDMENT TO AIR QUALITY PERMIT

Permit Amendment No. 3295-163-0035-P-01-1

Effective Date of Amendment

In accordance with The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to or in effect under that Act, Permit No. 3295-163-0035-P-01-0 issued on January 27, 2012 to:

Facility Name: PyraMax Ceramics, LLC – King's Mill Facility

Mailing Address: 161 Britt Waters Road, N.W.

Milledgeville, Georgia 31061

Facility Location: County Road 291

Wrens, Georgia 30833 (Jefferson County)

for the following: construction and operation of a ceramic proppant manufacturing facility

is hereby amended as follows: construction and operation of two additional process lines (Line 3 and Line 4).

Reason for Amendment: Application No. 21371 dated August 17, 2012

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 12 page(s).

This Permit Amendment is effective from the date first above written and is hereby made a part of Permit No. 3295-163-0035-P-01-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.

Discrete.		
Director		
Environment	al Protect	ion Division
	ai i iul e ul	ווטופועום ווטו

Table of Contents

PART 1.0	FACILITY DESCRIPTION	1
1.2	Process Description of Modification	1
PART 2.0	REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY	2
2.1	Facility Wide General Requirements	2
PART 3.0	REQUIREMENTS FOR EMISSION UNITS	3
3.1.1	Amended Emission Unit & Emission Group Listing	3
3.3	Equipment Federal Rule Standards	4
PART 4.0	REQUIREMENTS FOR PERFORMANCE AND COMPLIANCE TESTING	8
4.2	Specific Testing Requirements	8
PART 5.0	REQUIREMENTS FOR MONITORING (Related to Data Collection)	10
5.2	Specific Monitoring Requirements	10
PART 6.0	RECORD KEEPING, COMPLIANCE DEMONSTRATION AND REPORTING REQUIREMENTS	12
6.2	Specific Notification, Record Keeping, Compliance Demonstration & Report Requirements	12

PART 1.0 FACILITY DESCRIPTION

1.2 Process Description of Modification

1.2.1 The facility is currently permitted for the construction two identical process/kiln lines (Line 1 and Line 2) which can be operated independently. This is a modification for an additional two process/kiln lines (Line 3 and Line 4) which can be operated independently. The manufacturing processes along the process/kiln lines (Line 3 and Line 4) are the same as Line 1 and Line 2. The manufacturing process is the same as described in Permit No. 3295-163-0035P-01-0 except for the following:

Calcining/Sintering

The capacity of the kiln burner is 65 MMBtu/hr and can heat the calciner/kiln up to 3,000°F.

Supporting Operations

The proposed ceramic proppant manufacturing facility will have the following supporting operations/equipment:

- On-site research and development and QA/QC labs;
- Four (4) 30,000 gallon propane storage tanks providing backup fuel for all natural gas fired units;
- One (1) diesel engine powered emergency generator
- One (1) 322 gallon storage tanks for the emergency engines;
- One (1) 15,000 gallon diesel fuel storage tank for facility equipment;
- One (1) 33,000 gallon aqueous ammonia storage tanks for process pH control and control device operation.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide General Requirements

- 2.1.10 Approval to construct this ceramic proppant manufacturing facility shall become invalid for any of the following reasons:
 - a. The construction is not commenced within 18 months after issuance of this permit;
 - b. The construction is discontinued for a period of 18 months or more; or
 - c. The construction is not completed within a reasonable time.

The Division may extend the 18-month period upon a satisfactory showing that an extension is justified. For purposes of this permit, the definition of "commence" is given in 40 CFR 52.21(b)(9).

[40 CFR 52.21(r)]

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

3.1.1 Amended Emission Unit & Emission Group Listing

	Emission Units	Specific Limitations/Re	equirements	Air Pollution Contro	l Devices
ID No.	Description	Applicable Requirements/ Standards	Corresponding Permit Conditions	Description	ID No.
PS3,4	Slurry preparation – Line 3 Slurry Preparation – Line 4	391-3-102(2)(p)1 391-3-102(2)(b)	3.3.4, 3.3.5, 3.3.12, 4.2.5, 5.2.4, 6.2.13	Baghouses	PS 3,4
PEL3, SC3 PEL4, SC4	Spray Dryer/Pelletizer – Line 3 (Pelletizer, Screw Conveyor) Spray Dryer/Pelletizer – Line 3 (Pelletizer, Screw Conveyor)	391-3-102(2)(p)1 391-3-102(2)(b) 391-3-102(2)(g) 391-3-102(2)(n) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	3.3.1, 3.3.2, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.12, 3.3.18, 3.3.19, 4.2.1, 4.2.5, 4.2.6, 4.2.9, 5.2.1, 5.2.2, 5.2.4, 5.2.7, 5.2.10, 6.1.7, 6.2.1, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.8, 6.2.13, 6.2.20	Baghouses	внР3,4
GPS3,4 RB3,4 KE3, 4 VC3,4 BC3,4 SC5,6 FH3,4 SE3,4	Green Pellet Screen Reversing Belt Conveyor Kiln Feed Elevator Vibratory Conveyor Belt Conveyor Screw Conveyor Feed Hopper Seed Bin Elevator	391-3-102(2)(p)1 391-3-102(2)(b) 391-3-102(2)(n) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.12, 4.2.5, 5.2.3, 5.2.4, 5.2.7, 6.1.7, 6.2.1, 6.2.7, 6.2.8, 6.2.13	Baghouses	BHG3,4
FS30,40	Final Product Screen	391-3-102(2)(p)1 391-3-102(2)(b) 391-3-102(2)(n) 40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.12, 4.2.5, 5.2.3, 5.2.4, 5.2.7, 6.1.7, 6.2.1, 6.2.7, 6.2.8, 6.2.13	Baghouses	BHF3,4
KLN3	Calciner/Kiln Line 3 (Kiln, Kiln Cooler)	391-3-102(2)(p)1 391-3-102(2)(b) 391-3-102(2)(g) 391-3-102(2)(n) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	3.3.1, 3.3.2, 3.3.4, 3.3.5, 3.3.6, 3.3.8, 3.3.12, 3.3.13, 3.3.14, 3.3.15, 3.3.18, 3.3.19, 4.2.1, 4.2.2, 4.2.6, 4.2.7, 4.2.8, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 5.2.1, 5.2.2, 5.2.4, 5.2.8, 5.2.9, 5.2.10, 6.1.7, 6.2.1, 6.2.3, 6.2.13, 6.2.14, 6.2.15, 6.2.16, 6.2.17, 6.2.18, 6.2.20	Catalytic Baghouse	ВНК3

	Emission Units	Specific Limitations/R	equirements	Air Pollution Control	Devices
ID No.	Description	Applicable Requirements/ Standards	Corresponding Permit Conditions	Description	ID No.
KLN4	Calciner/Kiln – Line 4 (Kiln, Kiln Cooler)	391-3-102(2)(p)1 391-3-102(2)(b) 391-3-102(2)(g) 391-3-102(2)(n) 40 CFR Part 60, Subpart UUU 40 CFR 52.21 – PSD/BACT 112(g) case-by-case MACT/40 CFR 63, Subpart B	3.3.1, 3.3.2, 3.3.4, 3.3.5, 3.3.6, 3.3.8, 3.3.12, 3.3.13, 3.3.14, 3.3.15, 3.3.18, 3.3.19, 4.2.1, 4.2.2, 4.2.6, 4.2.7, 4.2.8, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 5.2.1, 5.2.2, 5.2.4, 5.2.8, 5.2.9, 5.2.10, 6.1.7, 6.2.1, 6.2.3, 6.2.13, 6.2.14, 6.2.15, 6.2.16, 6.2.17, 6.2.18, 6.2.20	Catalytic Baghouse	внк4
BC3,4	Belt Conveyor	391-3-102(2)(p)1	3.3.4, 3.3.5, 3.3.6,	Baghouse	BHL3,4
LE3,4	Loading Elevator	b) 1 t 1 (02(2)(0)	3.3.7, 3.3.12, 4.2.5,		
	1101811 2111	391-3-102(2)(n)	10 CFR Part 60, Subpart OOO 6.1.7, 6.2.1, 6.2.7,		
LS3,4	Loading Spout	40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT			
S3a	Control System –Line 3,4	391-3-102(2)(p)1	3.3.6, 3.3.7, 3.3.12,	Bin Vent Filter	S3a,S4a
S4a	Sodium Bicarbonate Silo	391-3-102(2)(b)	4.2.5, 5.2.7, 6.2.1, 6.2.2, 6.1.7, 6.2.7,		
		391-3-102(2)(n)			
		40 CFR Part 60, Subpart OOO 40 CFR 52.21 – PSD/BACT	6.2.8, 6.2.13		
СВ	Conveyor Baghouse	391-3-102(2)(p)1	3.3.4, 3.3.5, 3.3.6,	Baghouse	СВ
		391-3-102(2)(b)	3.3.7, 3.3.12, 4.2.5,		
		391-3-102(2)(n)	5.2.3, 5.2.4, 5.2.7,		
		40 CFR Part 60, Subpart OOO	6.1.7, 6.2.1, 6.2.7,		
		40 CFR 52.21 – PSD/BACT	6.2.8, 6.2.13		
EG2	Emergency Generator 2	40 CFR 52.21 – PSD/BACT	3.3.9, 3.3.10, 3.3.11,	None	None
		40 CFR Part 63, Subpart ZZZZ	3.3.12, 3.3.16,		
		40 CFR Part 60, Subpart IIII	3.3.17, 3.3.20, 3.3.21, 5.2.6, 5.2.10,		
			6.1.7, 6.2.9, 6.2.10,		
			6.2.11, 6.2.12,		
			6.2.13, 6.2.20		

^{*} Only source-specific conditions are listed for reference. Generally applicable requirements/conditions contained in this permit may also apply to emission units listed above.

3.3 Equipment Federal Rule Standards

NSPS Requirements

3.3.9 The Permittee shall comply with all the applicable provisions of 40 CFR, Part 60, Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines". In particular, the Permittee shall limit the accumulated maintenance check and readiness testing time for each emergency stationary diesel generator to 100 hours per year. The Permittee may petition the Division for approval of additional hours for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the emergency stationary diesel generators beyond 100 hours per year. Any operation other than emergency power generation, and maintenance check and readiness testing is prohibited.

[40 CFR 60.4211(e)]

3.3.10 Each emergency stationary diesel generator shall be certified for emission standards for new nonroad compression ignition engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants, operated and maintained according to the manufacturer's written specifications/ instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. The Permittee may only change diesel generator settings that are permitted by the manufacturer.

[40 CFR 52.21 PSD/BACT, 40 CFR 60.4202(a)(2), 60.4205 subsumed, 60.4206, 60.4211(a) and 60.4211(b)(1)and 60.4211(c)]

- 3.3.11 Each emergency stationary diesel generator and any associated control devices shall be installed and configured according to the manufacturer's written instructions.

 [40 CFR 60.4211(c)]
- 3.3.12 Emissions from each of the listed process units shall comply with the following pertinent BACT limits:

 [40 CFR 52.21 PSD/BACT]

Table 3.3.12-1: BACT Emission Limits for Process Units

Operation	Emission ^[1]	Emission Limit	Compliance Method	Averaging Time
	Filterable PM/PM ₁₀	0.010 gr./dscf	Methods 5 (Method 201/ 201A)	
Each calciner/kiln	PM/PM ₁₀ & CPM combined	8.53 lbs./hr	Methods 5 & 202 (Method 201/201A and Method 202)	3 hours
	PM _{2.5} & CPM combined ^[1]	6.98 lbs./hr	Methods 5 & 202 (Method 201/201A and Method 202)	
Each spray	PM/PM ₁₀	0.010 gr./dscf	Methods 5 & 202 (Method 201 or 201A in conjunction	3 hours
dryer/pelletizer			with Method 202 if necessary)	3 Hours
Each spray dryer/ pelletizer and calciner/kiln	Visible	10% opacity	COMS	6-minute average
Each of the emission units with baghouse	PM/PM ₁₀ /PM _{2.5}	0.005 gr./dscf	Method 5 (Method 201/201A)	3 hours
control excluding spray dryers/ pelletizers and calciners/kilns	Visible	7% opacity	Method 9	6-minute average
All fugitive sources	Fugitive	10% opacity	Method 22 and/or Method 9	Per Method 22 or Method 9
Each calciner/kiln	SO ₂	No less than 90% by weight overall control	Method 6 or 6C; Daily Analysis of Clay Sulfur	3 hours;
	N 1		Content	Daily average

Operation	Emission ^[1]	Emission Limit	Compliance Method	Averaging Time	
	NO _x	No less than 80% by weight overall control Not to exceed	Method 7 or 7E	3 hours	
		36.3 lbs/hr.			
	СО	33.0 lbs/hr.	Method 10	3 hours	
	VOC	0.71 lbs/hr	Method 25 or 25A	3 hours	
	CO ₂ e	436.0 lbs/ton cooler product	Mass balance calculation based on Division-approved emission factors	12-month rolling	
	NO _x	Not to exceed 2.25 lbs/hr.	Method 7 or 7E	3 hours	
Each aprov	СО	Not to exceed 13.73 lbs/hr.	Method 10	3 hours	
Each spray dryer/pelletizer	VOC	Not to exceed 11.78 lbs/hr.	Mass balance calculation	Monthly Average	
	CO ₂ e	44,446 tons	Mass balance calculation based on Division-approved emission factors	12-month rolling total	
Each Emergency Diesel Generator	CO ₂ e	153 tons	Mass balance calculation based on Division-approved emission factors	12-month rolling total	

^[1] CPM: condensable particulate matter

- a. The following applicable State rules or emission limits are subsumed by the applicable and more stringent BACT or NSPS emission limits:
 - Georgia Air Quality Rule 391-3-1-.02(2)(b): "Visible Emissions"
 - Georgia Air Quality Rule 391-3-1-.02(2)(p): "Particulate Emission from Kaolin and Fuller's Earth Processes"
 - Georgia Rule 391-3-1-.02(2)(g): "Sulfur Dioxide"
 - Georgia Air Quality Rule 391-3-1-.02(2)(n)2: "Fugitive Dust"
- b. Method 201 or 201A in conjunction with Method 202 shall be used to demonstrate compliance with the PM_{10} emission limits during the performance testing. As an alternative to Method 201 or 201A, the Permittee may assume that 100% of the PM emissions from the baghouses as determined via Method 5 are PM_{10} in the emission compliance demonstration, and use Method 5 in conjunction with Method 202 to demonstrate compliance with the PM_{10} emission limits.
- 3.3.16 The Permittee shall operate each stationary emergency diesel generator using diesel fuel that has a maximum sulfur content of 15 parts per million (ppm) (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent.

 [40 CFR 52.21 PSD /BACT, 40 CFR 60.4207(a) & 60.4207(b)]

^[2] The Tier III NO_x, CO, PM and VOC emission standards applicable to the diesel generators have been determined as BACT. Since the generator will be purchased as certified by U.S EPA to be in compliance with these standards, the BACT standards are not listed in this table. Please refer to Table 1 of 40 CFR 89.112 for details.

3.3.17 The accumulated annual operating time for each stationary emergency diesel generator shall not exceed 500 hours per year.

[40 CFR 52.21-PSD/BACT]

NESHAP Requirements

- 3.3.20 The Permittee shall comply with all the applicable provisions of 40 CFR Part 63, Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines". In particular, the Permittee shall operate each emergency stationary diesel generator only in an emergency situation such as to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility is interrupted, or to pump water in the case of fire or flood, etc. It may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the diesel generator.

 [40 CFR 63.6590(b)(i)]
- 3.3.21 The Permittee shall submit an Initial Notification for each emergency stationary diesel generator no later than 120 days after the startup of the diesel generator, following the applicable requirements under 40 CFR 63.9(b)(2)(i) through (v), and a statement that the diesel generator has no additional requirements and explain the basis of the exclusion. [40 CFR 63.6645(d)]

PART 4.0

REQUIREMENTS FOR PERFORMANCE AND COMPLIANCE TESTING

4.2 Specific Testing Requirements

- 4.2.1 Within 60 days after achieving the maximum production rate at which each of the spray dryers/pelletizers (Emission Unit ID Nos. PEL1, PEL2, PEL3, and PEL4) and each of the calciners/kilns (Emission Unit ID Nos. KLN1, KLN2, KLN3, and KLN4) will be operated, but no later than 180 days of the initial startup of the sources, the Permittee shall determine compliance with the NSPS Subpart UUU PM and visible emission limits in Condition 3.3.8 under 40 CFR 60.732 as follows:

 [40 CFR 60.736]
 - a. Method 5 or Method 17 shall be used to determine the PM concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm (60 dscf).
 - b. Method 9 and the procedures in 40 CFR 60.11, including the use of COMS in lieu of Method 9 if preferred, shall be used to determine opacity from stack emissions.
- 4.2.5 Within 180 days after the initial startup of this facility, the Permittee shall conduct initial performance tests as specified in the Table 4.2.5-1 to demonstrate initial compliance with the BACT, MACT and SIP emissions limits using applicable test methods and/or procedures specified in Condition 4.1.1 through 4.1.5. The tests shall be conducted under the conditions that exist when the affected source(s) is operating at the representative performance conditions. In lieu of the testing required by this condition, the appropriate testing results from Conditions 4.2.1 and 4.2.2, can be used to demonstrate initial compliance with the PM and visible emission limits for the same affected sources under the pertinent PSD/BACT and State rules in Sections 3.3 and 3.4 of this permit provided that the testing methodology meet the requirement of this condition.

 [391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

Table 4.2.5-1: Initial BACT & Case-By-Case MACT Performance Test for Process/Kiln Lines

Emission Unit	Emission Unit ID	Emissions & Parameters ^[1]
Calciner/Kiln No. 1	KLN1	Visible Emissions, CO, NO _x , particulate
Calciner/Kiln No. 2	KLN2	matter as specified, SO ₂ , HCl, HF and
Calciner/Kiln No. 3	KLN3	Reduction/control efficiency of NO _x , SO ₂ ,
Calciner/Kiln No. 4	KLN4	HCl & HF
Spray Dryer/Pelletizer No. 1	PEL1	Visible Emissions, CO, NO _x and particulate
Spray Dryer/Pelletizer No. 2	PEL2	matter as specified
Spray Dryer/Pelletizer No. 3	PEL3	
Spray Dryer/Pelletizer No. 4	PEL4	
Other stack emission sources	(refer to Table 3.1)	Visible Emissions & particulate matter as
excluding spray dryers/pelletizers,		specified
calciners/kilns and silos with		
dedicated bin vents.		
Silos with dedicated bin vents	(refer to Table 3.1)	Visible Emissions

[1] CPM: condensable particulate matter; HCl and HF emissions should be determined in lbs/ton of kiln feed for use in Condition 6.2.17.

AIR QUALITY PERMIT AMENDMENT

Permit No.: 3295-163-0035-P-01-1

When starting to use a different sorbent to control NO_x , SO_2 , HCl and HF emissions from calciner(s)/kiln(s) via the "catalytic baghouses" the first time, the Permittee shall conduct performance tests to determine the NO_x , SO_2 , HCl, HF emission rates and control efficiencies of SO_2 , HCl and HF for the sorbent within the time specified by the Division. The Permittee shall notify the Division in writing of the change 60 days in advance. [391-3-1-.02(3) and 3-1-3-1-.03(2)(c)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

5.2.1 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated emissions or parameters on the following equipment listed. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements and be operated in a manner sufficient to demonstrate continuous compliance with the applicable emission standards in this permit.

[40 CFR 60.734(a) and 391-3-1-.02(6)(b)1]

Emission Unit Being Monitored	Emission Unit ID	Emissions or Parameters Being Monitored	Monitoring System Being Used & Installation Location
Kiln Nos. 1-4	KLN1-4	Visible Emissions	A Continuous Opacity Monitoring System (COMS) at the outlet of the Kiln Catalytic Baghouse Nos. 1-4 (BHK1-4)
Spray Dryer/Pelletizer No. 1-4	PEL1-4	Visible Emissions	A COMS at the outlet of the Process/Kiln Line No. 1-4 Baghouse for Pelletization (BHP1-4)

The sources shall be maintained such that the 6-minute average opacity for any 6-minute period for any COMS does not exceed the visible emission limit in Conditions 3.3.8 or 3.3.12. If the average opacity for any 6-minute period exceeds any of the opacity limits in these conditions, this shall constitute a violation of the visible emission standard.

5.2.2 The Permittee shall install a device to continuously monitor the temperature at the inlets of baghouses that receive gases at a temperature higher than ambient air (BHP1, BHP2, BHP3, BHP4, BHK1, BHK2, BHK3 and BHK4), and record the time and date of each incident when the temperature exceeds the fabric filter bag design temperature. In lieu of monitoring temperature at the baghouse inlet, the Permittee may monitor a surrogate temperature (e.g., clay temperature or dryer/pelletizer outlet temperature). For each baghouse monitored by a surrogate temperature, the Permittee shall determine the equivalent fabric filter bag design temperature and record each incident when the surrogate temperature exceeds the equivalent fabric filter bag design temperature. The Permittee shall record the fabric filter bag design temperature or the equivalent filter bag design temperature for each fabric baghouse listed. Such records and any supporting calculations shall be made available for inspection.

[391-3-1-.02(6)(b)1]

5.2.6 Each stationary emergency diesel generator shall be equipped with a non-resettable hour meter to track the number of hours operated during any type of operation and during each calendar month. The Permittee shall record the time of operation and the reason the generator was in operation during that time.

[40 CFR 60.4209(c) and 60.4214(b)]

- 5.2.10 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record each of the indicated parameters on the following equipment in accordance with the manufacturer's recommendations. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
 - [391-3-1-.02(6)(b)1]
 - a. The exhaust gas temperature at the inlet of each of the "catalytic baghouse" systems serving calciners/kilns.
 - b. The ammonia injection rate to each of the "catalytic baghouse" systems serving calciners/kilns.
 - c. The injection rate of powdery sorbent to each of the "catalytic baghouse" systems serving calciners/kilns.
 - d. The slurry input rate (1-hour block average) to each spray dryer/pelletizer.
 - e. The kiln feed input rate (1-hour block average) to each calciner/kiln.
 - f. Monthly total output of cooler product for each calciner/kiln
 - g. Monthly fuel usage for each spray dryer/pelletizer, calciner/kiln, the 9.8 MMBtu boiler, and all emergency diesel generators combined.

PART 6.0 RECORD KEEPING, COMPLIANCE DEMONSTRATION AND REPORTING REQUIREMENTS

- 6.2 Specific Notification, Record Keeping, Compliance Demonstration & Report Requirements
 - 6.2.9 The Permittee shall maintain monthly operating records of the each stationary emergency diesel generator, including operating hours and reasons of the operation, e.g., emergency power generation and/or fire distinguishing, readiness testing and/or maintenance check. These records shall be kept available for inspection or submittal for 5 years from the date of record.

[40 CFR 60.4211(e) & 40 CFR 52.21-PSD/BACT]

6.2.11 The Permittee shall keep records verifying that each shipment of diesel fuel received for firing the each stationary emergency diesel generator complies with the applicable requirements in Condition 3.3.16. Verification shall consist of the fuel oil receipts and fuel supplier certifications or results of analyses of the fuel oils conducted by methods of sampling and analysis which have been specified or approved by the EPA or the Division. These records shall be kept available for inspection or submittal for 5 years from the date of record.

[40 CFR 60.4207 and 40 CFR 52.21 – PSD/BACT]

6.2.20 The Permittee shall utilize the appropriate records in Condition 5.2.10 to calculate the CO₂e emissions from <u>each</u> spray dryer/pelletizer, calciner/kiln, 9.8 MMBtu/hr natural gas fired boiler, and <u>all</u> diesel generators combined during each period of twelve (12) consecutive months. The results of the calculated CO₂e emissions shall be expressed in the same units as the corresponding BACT limits listed in Condition 3.3.12. In the emissions calculation, the Permittee shall use GHG emission factors used in the Application supporting this permit, and keep records of the calculations and all the emission factors. The Permittee shall notify the Division in writing if any of the CO₂e emissions calculated exceed its corresponding limit specified in Condition 3.3.12. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain or maintain compliance with the emission limit.

[391-3-1-.02(6)(b)1 and 40 CFR 52.21 - PSD/BACT]

ATTACHMENT A

List Of Standard Abbreviations

AIRS Aerometric Information Retrieval System APCD Air Pollution Control Device ASTM American Society for Testing and Materials BACT Best Available Control Technology BTU British Thermal Unit CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides NSPS New Source Performance Standards		
ASTM American Society for Testing and Materials BACT Best Available Control Technology BTU British Thermal Unit CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H2O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides		
BACT Best Available Control Technology BTU British Thermal Unit CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	APCD	Air Pollution Control Device
BACT Best Available Control Technology BTU British Thermal Unit CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides		
BTU British Thermal Unit CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	ASTM	American Society for Testing and Materials
CAAA Clean Air Act Amendments CEM Continuous Emission Monitor CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	BACT	Best Available Control Technology
CEM Continuous Emission Monitor CERMS Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	BTU	British Thermal Unit
CERMS Continuous Emission Rate Monitoring System CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CAAA	Clean Air Act Amendments
CFR Code of Federal Regulations CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CEM	Continuous Emission Monitor
CMS Continuous Monitoring System(s) CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CERMS	Continuous Emission Rate Monitoring System
CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CFR	Code of Federal Regulations
CO Carbon Monoxide COM Continuous Opacity Monitor dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CMS	Continuous Monitoring System(s)
dscf/dscm Dry Standard Cubic Foot / Dry Standard Cubic Meter EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	CO	
EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	COM	Continuous Opacity Monitor
EPA United States Environmental Protection Agency EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	dscf/dscm	Dry Standard Cubic Foot / Dry Standard Cubic
EPCRA Emergency Planning and Community Right to Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides		1 *
Know Act gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	EPA	United States Environmental Protection Agency
gr Grain(s) GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	EPCRA	Emergency Planning and Community Right to
GPM (gpm) Gallons per minute H ₂ O (H2O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides		Know Act
H ₂ O (H ₂ O) Water HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	gr	Grain(s)
HAP Hazardous Air Pollutant HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	GPM (gpm)	Gallons per minute
HCFC Hydro-chloro-fluorocarbon MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	H ₂ O (H2O)	Water
MACT Maximum Achievable Control Technology MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	HAP	Hazardous Air Pollutant
MMBtu Million British Thermal Units MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	HCFC	Hydro-chloro-fluorocarbon
MMBtu/hr Million British Thermal Units per hour MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	MACT	Maximum Achievable Control Technology
MVAC Motor Vehicle Air Conditioner MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	MMBtu	Million British Thermal Units
MW Megawatt NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	MMBtu/hr	Million British Thermal Units per hour
NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	MVAC	Motor Vehicle Air Conditioner
NESHAP National Emission Standards for Hazardous Air Pollutants NO _x (NOx) Nitrogen Oxides	MW	Megawatt
NO _x (NOx) Nitrogen Oxides	NESHAP	National Emission Standards for Hazardous Air
		Pollutants
	NO _x (NOx)	Nitrogen Oxides
	NSPS	New Source Performance Standards
OCGA Official Code of Georgia Annotated	OCGA	Official Code of Georgia Annotated

PM	Particulate Matter			
PM_{10}	Particulate Matter less than 10 micrometers in			
(PM10)	diameter			
PPM (ppm)	Parts per Million			
PSD	Prevention of Significant Deterioration			
RACT	Reasonably Available Control Technology			
RMP	Risk Management Plan			
SIC	Standard Industrial Classification			
SIP	State Implementation Plan			
SO ₂ (SO2)	Sulfur Dioxide			
USC	United States Code			
VE	Visible Emissions			
VOC	Volatile Organic Compound			
	•			

List of Permit Specific Abbreviations

None	N/A		